REMARKS

Applicants would like to thank the Examiner for the detailed Official Action provided. However, in the next Official communication Applicants respectfully request that the Examiner acknowledge Applicants' Claim for Priority and Receipt of the certified copy of the priority documents in the Official Action on the Official Action Summary PTOL-326.

Applicants additionally wish to thank the Examiner for considering the materials cited in the Information Disclosure Statements filed in the present application on December 14, 2007, by the return of the signed and initialed Form PTO-1449 attached to the above-noted Information Disclosure Statements. In regards to the IDS reference the Examiner did not consider (i.e., "Technique is a Breath of Fresh Air", Design Advice, No. 1, 2002, Downloaded from http://cig.bre.co.uk/DesignAdvice/downloads/dan4.pdf on April 14, 2003), Applicants are hereby submitting a more legible copy of the same for consideration by the Examiner. Applicants respectfully request that the Examiner acknowledge consideration of the above identified reference in the next Official communication by the return of the Form PTO-1449 with the Examiner's signed initials next to the above identified reference.

Upon entry of the present Response, claims 1-3, 5, 8, 10-17, and 20-22 will have been amended. The amendments made to claims 2, 5, 8, 10-13, and 17 were made solely for cosmetic purposes and not related to patentability. Claim 26 will have been added. Claims 18 and 19 will have been canceled without prejudice or disclaimer and claims 23-25 remain canceled without prejudice or disclaimer. No new matter will have been presented by the above amendments. Claims 1-17, 20-22, and 26 are pending for consideration by the Examiner. Applicants respectfully request reconsideration and withdrawal of the outstanding objections and rejections

of the claims pending in the present application. Such action is respectfully requested and is now believed to be appropriate.

Objection to the Drawings

In the outstanding Official Action, the Examiner objected to the drawings asserting that that the figures fail to show what constitutes intermediate layer (2). More specifically, the Examiner asserts that the figures fail to describe each individual layer of the intermediate layer (2). Applicants respectfully submit that sufficient structural detail of the intermediate layer (2) is provided by the figures for proper understanding of the presently claimed invention by those having ordinary skill in the art. In particular, the separate layers of the intermediate layer (2) (at e.g., FIG 2) each represent different filter layers of varying filter characteristics. That is, variations in filtering characteristics may be achieved by configuring each layer with a different material or different grade of material (e.g., having different density or fibre size) such that the layers trap large particles on the outside and small particles towards the inside. Thus, various combinations of layers varying through the depth of the intermediate layer prevent premature clogging of the panel and improving the service life of the panel. *See e.g.*, specification page 8, lines 18-31. In other words, the exact position of the layers is not necessarily dependent on the material of which it is formed, but that the filtering characteristics are such that particles of decreasing sizes are trapped along the filter profile. Therefore, at least because the figures currently provide the essential structural details to understand the presently claimed invention as shown above, Applicants respectfully submit that the objection is now believed to be moot and should be withdrawn.

Objection to the Specification

The Examiner has objected to the specification indicating that the Applicants' Abstract does not commence on a separate sheet. Without agreeing to the propriety of the Examiner's objection and solely to expedite the examination process, Applicants have provided an amended Abstract on a separate sheet. Accordingly, the objection is now believed to be moot and should be withdrawn.

Objections to the Claims

The Examiner has objected to claim 18 for informalities. Without agreeing to the propriety of the Examiner's objection and solely to expedite the examination process, Applicants have canceled claim 18 to eliminate any possible basis for the objection. Accordingly, the objection is believed to now be moot and should be withdrawn.

Indefiniteness Rejection Under 35 USC §112, 1st Paragraph

In the outstanding Official Action, the Examiner has rejected claim 20 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. More particularly the Examiner asserts that the specification does not provide the proper enablement for one of ordinary skill in the art to achieve the process step of "arranging for filtered air from within the building…to pass to the exterior of the building…" However, contrary to the Examiner's position, Applicants submit that proper enablement for this process step can be found in the specification as originally filed at at least page 6, lines 18-27. Thus at least because Applicants have provided evidence in the specification to support proper enablement of claim 20, it is respectfully requested that the Examiner withdraw the rejection of the claim under 35 USC 112, 1st paragraph.

Indefiniteness Rejection Under 35 USC §112, 2nd Paragraph

In the outstanding Official Action, the Examiner has rejected claim 3 under 35 U.S.C. §112, 2nd paragraph. The Examiner asserts that these claims are indefinite for failing to particularly point out the distinctly claimed subject matter which Applicants regard as their invention.

In particular, the Examiner asserts that it is unclear whether the material has thermal and sound insulating properties, or thermal or sound insulating properties. Applicants respectfully submit that those having ordinary skill in the art would readily and clearly understand the limitation as previously presented. However, without agreeing to the propriety of the Examiner's rejection and solely to expedite the examination process, Applicants have amended claim 3 to solely recite thermal insulating properties, and has added new claim 26 which recites sound insulating properties. It is thus respectfully requested that the Examiner withdraw the rejection of claim 3 under 35 USC 112, 2nd paragraph.

Anticipation Rejections under 35 USC §102(b)

The Examiner rejected claims 1-3, 7-15, 18, 19 and 22 under 35 U.S.C. §102(b) as being anticipated by STERRETT (U.S. Pat. No. 3,619,961). Applicants respectfully traverse the rejections and request withdrawal of the rejections in view of the following remarks.

For an anticipation rejection under §102 to be proper, a single reference must disclose each and every element recited in a claim. In this regard, it is respectfully submitted that STERRETT fails to disclose each and every element of at least independent claims 1 and 22.

Independent claims 1 and 22 generally recite a cladding material including, *inter alia*, an outer permeable layer, an inner permeable layer, and an intermediate layer, wherein the

intermediate layer is provided with a graduated filtering profile such that, along an airflow direction of the intermediate layer, particles of decreasing sizes are trapped.

In contrast, STERRETT merely discloses a venting roof insulation product including a rigid board 11 having grooves 12 and a channel 13. The grooves and channel allow for the escape of entrapped moisture (*see* col. 2, lines 42-44). There is no disclosure that the rigid board 11 has a graduated filtering profile along an airflow direction, let alone an intermediate layer having a filtering profile that traps particles of decreasing sizes along its profile. In other words, STERRETT at best discloses that moisture can escape a single rigid board by flowing over and around the rigid board by the channel 13 and the grooves 12, not through it. Further, it is submitted that the grooves and channel do not trap particles at all, but rather allow them to escape. This is in complete contrast to the presently claimed invention that is configured to trap particles within the intermediate layer as air passes through the graduated filtering profile.

Applicants further submit that the rigid board 11 of STERRETT is formed of a foamed polystyrene (*see* col. 2, line 12). In this regard, polystyrene, as well as other cellular plastics such as polyurethane, all have a closed cell structure. That is, although they contain air spaces, they are impermeable due to their closed cell nature. Thus, the rigid board 11 cannot be used as a filter since air cannot permeate or diffuse through it. In fact, the rigid board 11 is specifically designed to be impermeable so that excess water from the concrete layers 15 and 16 can escape and be fed out via its channels.

Thus, at least because STERRETT fails to disclose a cladding material including an outer permeable layer, an inner permeable layer, and an intermediate layer, wherein the intermediate layer is provided with a graduated filtering profile such that, along an airflow direction of the intermediate layer, particles of decreasing sizes are trapped, as generally recited in independent

claims 1 and 22, at least these features are not anticipated by the abovementioned references. Therefore, absent a disclosure in a single reference of each and every element recited in a claim, a *prima facie* case of anticipation cannot be made under 35 U.S.C. § 102. Since STERRETT fails to disclose each and every element recited in rejected claims 1 and 22, claims 1 and 22 are not anticipated thereby. Accordingly, the Examiner is respectfully requested to withdraw the rejections under 35 U.S.C. § 102(b).

With respect to the Examiner's rejection of dependent claims 2-15 and 17, Applicants submit that these claims are dependent, either directly or indirectly, from allowable independent claim 1, which is allowable for at least the reasons discussed *supra*. Thus, these dependent claims are also allowable for at least the reasons discussed *supra*. Further, all dependent claims set forth a further combination of elements neither taught nor suggested by any of the references of record. Additionally, at least because new claim 26 is dependent from allowable independent claim 1, Applicants respectfully submit that new claim 26 is also allowable for the above-noted reasons.

Obviousness Rejections under 35 USC §103(a)

The Examiner rejected claims 4-6 under 35 U.S.C. §103(a) as being unpatentable over STERRETT in view of ROSENBLATT (U.S. Pat. No. 3,147,926). The Examiner also rejected claims 16, 17, 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over STERRETT.

Applicants respectfully traverse the obviousness rejections and request withdrawal of the rejections in view of the following remarks.

With respect to the rejection of dependent claims 4-6 and 17 at least because these claims are dependent, either directly or indirectly, from allowable independent claim 1, which is allowable for at least the reasons discussed *supra*, these dependent claims are also allowable for

at least the reasons discussed *supra*. Further, all dependent claims set forth a further combination of elements neither taught nor suggested by any of the references of record. It is thus respectfully requested that the Examiner withdraw the rejections of claims 4-6 and 17 under 35 USC §103(a).

With respect to the Examiner's rejection of claims 16, 17, and 20, the Examiner has taken official notice that it is well known in the art to identify pollutants and configure the appropriate filter (as generally recited in claim 16), to provide a plurality of panels (as generally recited in claim 17), and to arrange for filtered air to pass to the exterior of the building or other construction (as generally recited in claim 20); however, Applicants respectfully traverse such Official Notices, as they are entirely without support. Thus, Applicants respectfully request that the Examiner provide support for such Official Notice by identifying, *e.g.*, a reference, should the Examiner choose to maintain this rejection.

Nevertheless, with respect to the rejection of claims 16, 20 and 21, for an obviousness rejection under §103(a) to be proper, the Examiner must indicate that each limitation is shown or provide at least a clear articulated reason for rendering the claimed invention obvious. In this regard, it is respectfully asserted that STERRETT, alone or in any proper combination with ROSENBLATT, fails to disclose or render obvious the combination of features, as generally recited in at least independent claims 16 and 20.

In this regard, independent claims 16 and 20 generally recite methods, *inter alia*, providing a panel unit(s)/filtration layer having a graduated filtration layer such that, along an airflow direction of the panel unit(s)/filtration layer, particles of decreasing sizes are trapped.

More specifically, it is respectfully submitted that STERRETT, alone or in combination with ROSENBLATT, fails to disclose or render obvious at least a panel unit(s)/filtration layer

having a filtering profile such that, along an airflow direction of the panel unit(s)/filtration layer, particles of decreasing sizes are trapped, as generally recited in at least independent claims 16 and 20.

As discussed above, STERRETT merely discloses a venting roof insulation product including a rigid board 11 having grooves 12 and a channel 13. The grooves and channel allow for the escape of entrapped moisture (*see* col. 2, lines 42-44). There is no disclosure that the rigid board 11 has a graduated filtering profile along an airflow direction, let alone an panel unit(s)/filtration layer having a filtering profile that traps particles of decreasing sizes along its profile.

Similarly, ROSENBLATT fails to cure the deficiencies of STERRETT. ROSENBLATT merely discloses an acoustical and luminous ceiling structure including a metal support 30 filled with a sound absorbing material 72. There is no disclosure of panel unit(s)/filtration layer provided with a graduated filtering profile along an airflow direction, let alone panel unit(s)/filtration layer having a filtering profile that traps particles of decreasing sizes along its profile. ROSENBLATT, at best, discloses that the sound absorbing material absorbs sounds that are coming from an interior of a room to soften the noise and prevent the sound from traveling outside the room, and thus making the room more quiet.

Further, if the mineral wood panel 72 were used as the rigid layer 11 in STERRETT, STERRETT would no longer be able to channel the excess moisture from the concrete layers. This is because mineral wool is hygroscopic and therefore such a layer would simply absorb excess water, which would be exactly the opposite of what STERRETT aims to achieve. Thus, for at least these reasons STERRETT, alone or in combination with ROSNEBLATT, fails to

disclose or render obvious at least the features of the intermediate layer/panel unit/filtration layer of independent claims 1, 16, 20 and 22, respectively.

With respect to the Examiner's rejection of dependent claim 21, Applicants submit that this claim is dependent from allowable independent claim 20, which is allowable for at least the reasons discussed *supra*. Thus, this dependent claim is also allowable for at least the reasons discussed *supra*. Further, claim 21 sets forth a further combination of elements neither taught nor suggested by any of the references of record.

SUMMARY

Applicants submit that the present application is in condition for allowance, and respectfully requests an indication to that effect. Applicants have argued the allowability of the claims and pointed out deficiencies of the applied references. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the claims therein are respectfully requested and is now believed to be appropriate.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejection is made by the present amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
Mohammed IMBABI .

William S. Boshnick
Reg. No. 44,550

Attachment: Copy of IDS Reference - "Technique is a Breath of Fresh Air", Design Advice, No. 1, 2002, Downloaded from http://cig.bre.co.uk/DesignAdvice/downloads/dan4.pdf on April 14, 2003

Aug 28, 2008
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191

Technique is a breath of fresh air

A technology that draws heat back into a building as it tries to escape sounds too good to be true, but that is exactly the trick dynamic insulation performs. By drawing fresh air through a building's insulation layer, which acts as a heat exchanger, heat normally lost by conduction is taken up by incoming air, with a corresponding reduction in heating bills.

With no need for the ductwork and filters associated with air-conditioning, air quality is better too. So this technique offers an alternative for people looking for high standards of energy efficiency, but who would rather not live or work in a mechanically ventilated airtight box.

Dynamic insulation is still a novelty in the UK. The first major building project to use it, the McLaren Community Leisure Centre in Callander, Scotland (*above*), was only completed in 1998. By contrast, expertise in Scandinavia was developing throughout the 90s, with the system used successfully on a variety of building types, including thousands of homes.

All this could be about to change, however, as a number of UK projects are at an advanced stage of nearing completion. Design Advice consultant Gaia Architects, recognised as the leading exponent in the UK, has a hand in most of them.

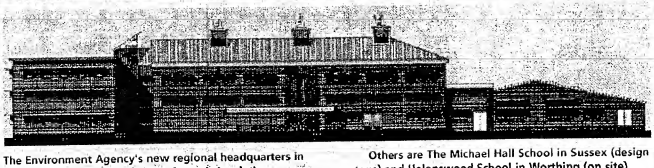
Gaia's sports hall at Kinlochleven on the west coast of Scotland has just been completed, and Glasgow City Council Architects' Drumchapel Sports Centre (on which Gaia advised) opens in 2002. And to demonstrate how dynamic insulation provides exceptional air quality, Gaia is using it in a demonstration project of 14 'low-allergy' homes for Fairfield Housing Co-operative in Perth, also about to go on site.

Whatever the building type, dynamic insulation relies on a controlled and constant air flow across an air-permeable membrane. This requires air to be pulled into an interior kept at slightly negative pressure or, more commonly, pushed into the interior from a pressurised roof space. Input fans used to generate this pressure run at low velocity and so have only a modest power requirement.

A side effect of air warming as it passes through the building fabric is that it absorbs water vapour as it arrives on the other side. So effective is this that dynamic insulation can eliminate condensation problems.

"We're now convinced that swimming pools are the perfect application for dynamic insulation," says Gaia's Howard Liddell. "You get a double bonus – reduced ventilation rates, which bring down heating costs, and a dry structure that is less prone to corrosion."

For more information on dynamic insulation visit Gaia's website at www.gaiagroup.org



The Environment Agency's new regional headquarters in Ipswich (*above*) is one of three dynamic insulation projects on which Gaia, supported by Design Advice, has advised. Some of the techniques used on The Charter Partnership's major upgrade of the early-70s building are likely to be used on further EA projects.

Others are The Michael Hall School in Sussex (design stage) and Helenswood School in Worthing (on site). This second project was to have separate M&E services for the sports hall and changing rooms. But with dynamic insulation, air from the sports hall could be recycled – M&E costs fell by £30,000 as a result.